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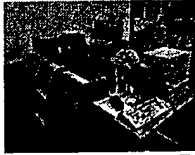
Introductory remarks,

- This presentation is an update on GVP status and progress review.
- SA Conference attendees should know of its availability

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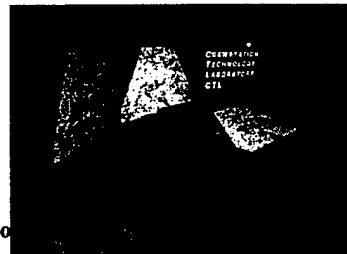


## Crewstation Technology Laboratory (CTL)



- Advanced Technologies for NAVY Crewstations
- Methods and Procedures for Behavioral Test and Analysis.

- Human Performance Evaluation
- Modeling & Simulation
  - Rapid prototyping
- Helmet Mounted Displays
- Mission Planning & Rehearsal
- Display Symbology RDT&E
- Data Visualization
  - Architecture, Information Content, Network
- Video Data Recording and Analysis



This is the home base for GVP.

- Where CTL is and who we are.
- What we do.



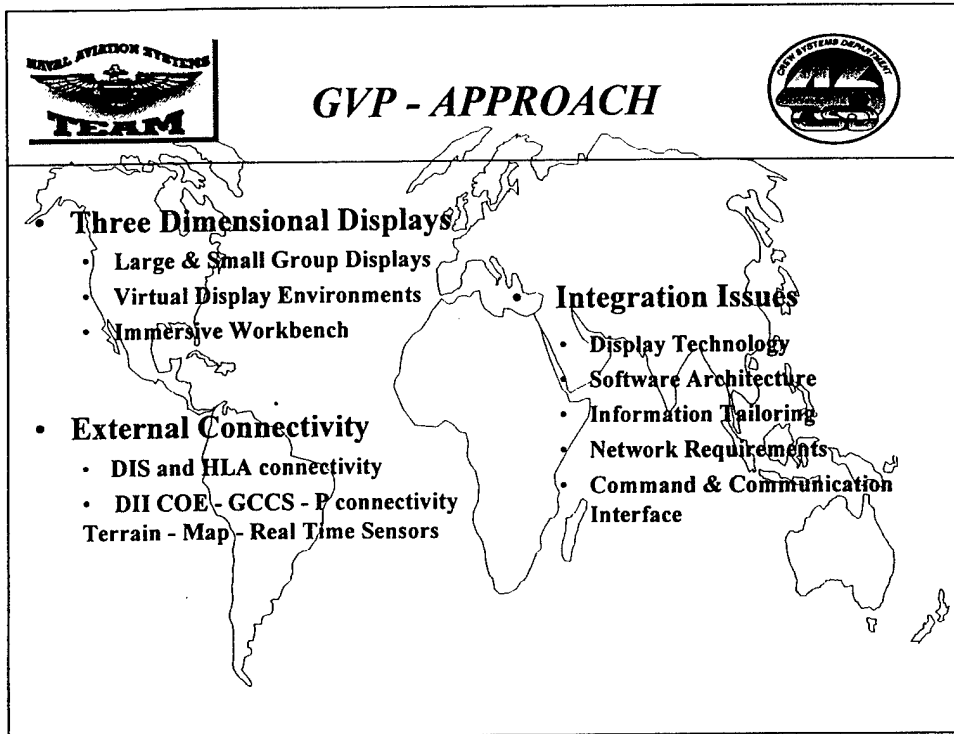
- GVP -  
Advanced Visualization Software





RSDUNN

GVP is Primary Software for Advanced Visualization

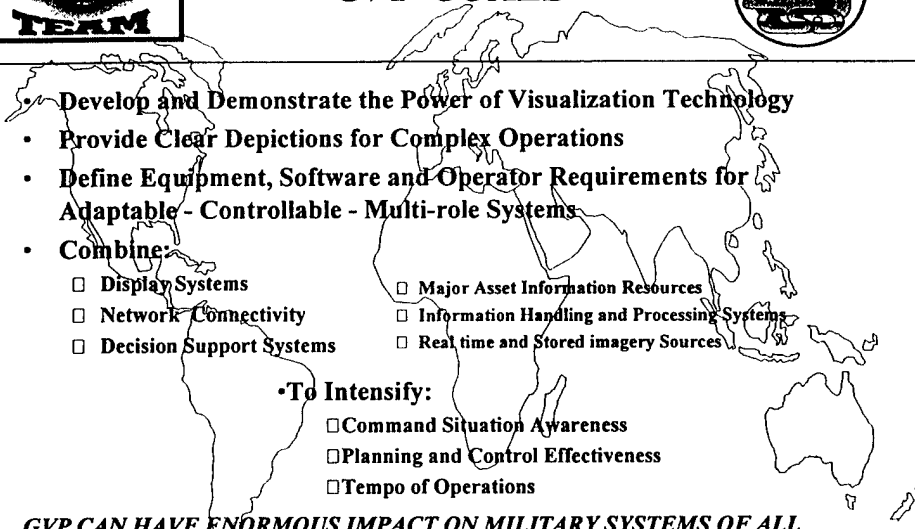
- State overall goals from next slide but do not display it.
- Developed to evaluate the power of advanced visual display tools



Not used in presentation but contained in proceedings



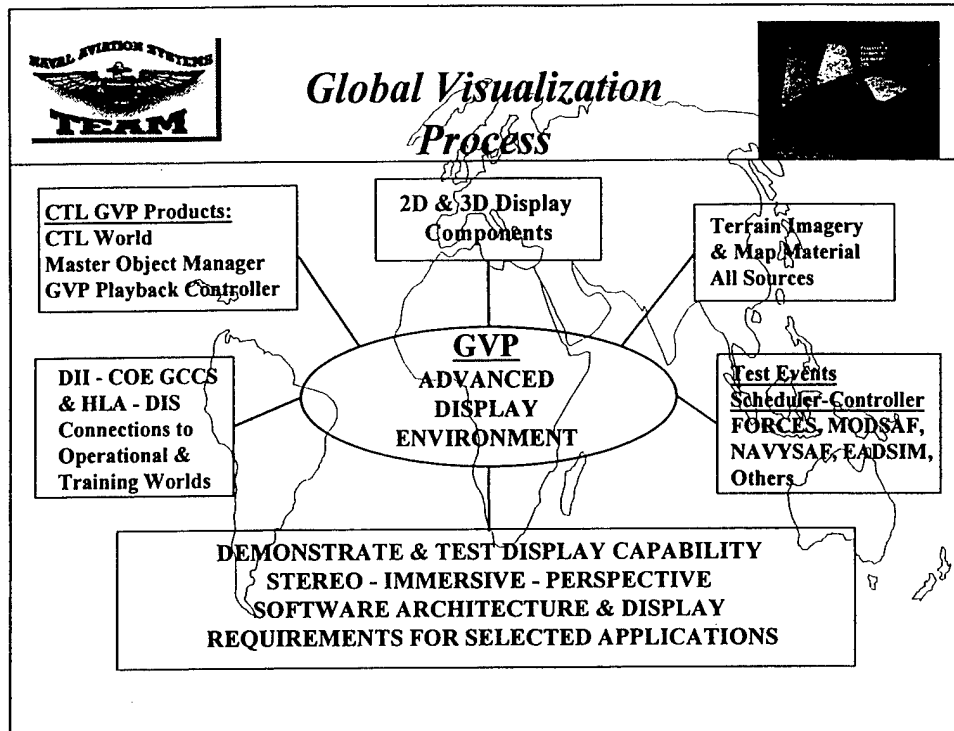
## GVP GOALS



- **Develop and Demonstrate the Power of Visualization Technology**
- **Provide Clear Depictions for Complex Operations**
- **Define Equipment, Software and Operator Requirements for Adaptable - Controllable - Multi-role Systems**
- **Combine:**
  - ☐ Display Systems
  - ☐ Network Connectivity
  - ☐ Decision Support Systems
  - ☐ Major Asset Information Resources
  - ☐ Information Handling and Processing Systems
  - ☐ Real time and Stored imagery Sources
- **To Intensify:**
  - ☐ Command Situation Awareness
  - ☐ Planning and Control Effectiveness
  - ☐ Tempo of Operations

***GVP CAN HAVE ENORMOUS IMPACT ON MILITARY SYSTEMS OF ALL TYPES FOR PLANNING, SIMULATION, TRAINING, TESTING, REHEARSAL AND COMBAT OPERATIONAL CONTROL***

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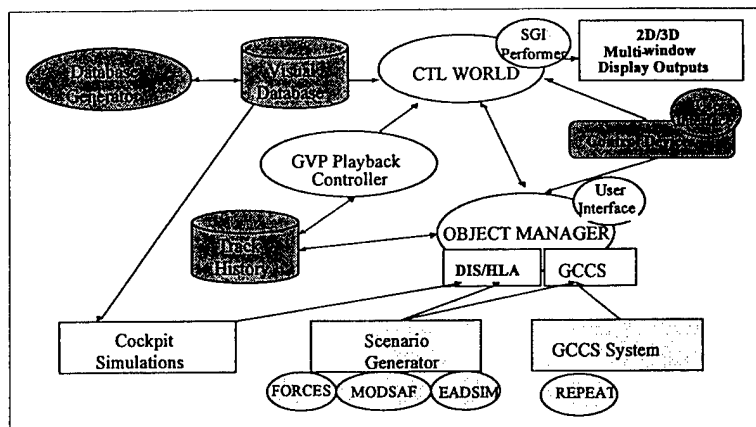


The major parts of the GVP System shown here and in next slide

- It is all-source geospecific and holds a world model all the time
- WGS-84 standard geometry
- has connectivity to Simulations, M&S Packages, Operations
- CTL has M&S drivers to create military scenarios for visualization



## GVP OVERVIEW



- CTL World can hold earth at 4 cm. resolution - fully scaleable - full stereo
- Object Manager can be a server for multiple displays
- Playback Controller for analysis
- All this software is operational and government owned







## *Global Visualization Process (GVP)*





### **STATUS and ACCOMPLISHMENTS - FY '00**

- **GVP Operational, System Integration Fully Demonstrated**
- **Unique CTL WORLD Software for Display Control Completed**
- **Fully Scalable, Multi Resolution, Geo-specific, Geo-referenced, All-Source, Terrain Visualization. Numerous Example Areas**
- **Connectivity to Operational and Simulation Domains via DII, COE, HLA & DIS - Secure Operations Enabled**
- **Extensive Operator and User Interface Components and Features**
- **Accessible and Flexible Basic Software can be Tailored for Specific Applications**
- **Master Object Manager System Control Module Operational**

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	<h2><i>Global Visualization Process (GVP)</i></h2>	
<b>STATUS and ACCOMPLISHMENTS - FY*00</b>		
<ul style="list-style-type: none"><li>• Reference Geometry, WGS-84, Preserves Positional Data Accuracy. Fully Interoperable with Navigation Systems</li><li>• GVP is Efficient Software. High Update Rates, Large Area Coverage and High Numbers of Fixed and Moving Models</li><li>• Multi Format Video Outputs for All Types of Displays</li><li>• Full 3D Binocular Stereoscopic Display Outputs - Several Modes</li><li>• Terrain Database Generation from All Sources</li><li>• Flexible and Accessible User Interfaces</li><li>• GVP is Government Owned and Developed. Revision not restricted by Inaccessible Software</li><li>• GVP is ready <u>NOW</u> for Application Tailoring and Testing</li></ul>		

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	<h2>Global Visualization Process (GVP)</h2>	
<h3>STATUS and ACCOMPLISHMENTS - FY'01</h3>		
<ul style="list-style-type: none"> <li>• PC Version Operational. Advanced PC Class Computers Can Run GVP under LINUX</li> <li>• GVP Versions Consolidated (IRIX-LINUX)</li> <li>• MOM Architecture Supports Multiple Coordinated GVP Displays</li> <li>• Completed two Major Trade Show Demos (I/ITSE)</li> <li>• Applications: underway, pending, proposed             <ul style="list-style-type: none"> <li>- UAV Training Support Operational with UAV - TCS Database</li> <li>- NRL Display Support Installation</li> <li>- NASA Johnson Space Center Installation (Mars Data)</li> <li>- Flight Simulation at CTL Since '98</li> <li>- Sensor Modeling R&amp;D, Full surround view with HMD</li> <li>- Proposed Navy-USAF C2 Air Defense Site Displays</li> <li>- Proposed Navy Aircraft Synthetic Vision System</li> </ul> </li> </ul>		

New Developments in GVP listed here

- PC Version developed
- LINUX and the original SGI version are ONE program
- Strong progress on operational UAV training support application
- Underway, pending and proposed applications



## *Global Visualization Process (GVP)*



For GVP Information Contact Us at CTL

**GVP is ready NOW for Application Tailoring and Testing  
Find Out How to Put GVP to Work in YOUR Project!**


**Call or e-mail to obtain  
DVD Demo "GVP - The Movie"  
Visit CTL at NAWCAD PAX  
to See GVP in Operation**

**R.S.Dunn  
48110 Shaw Road B2187  
Patuxent River MD 20670-1906 e-mail:  
DunnRS@navair.navy.mil**




Find out more about this available process.

- Call us
- Get the DVD Demo
- Visit CTL



## Global Visualization Process



### Potential Civil and Navy Applications of GVP

- Highway Network Status Depiction, Resource Allocation, Construction and Rights of Way
- State Civil Defense and Emergency Preparedness, Visualization for Disaster Response Control and Coordination
- Power, Rail, Communication Support
- Wildlife Management and Range Data
- Environmental Impact, Water Supply, Aquifer Usage, Contamination Events
- Air Traffic Depiction and Control
- Bay Status, Ship Traffic and Spill Control, Maritime Data
- Beach Erosion and Seaboard Storm Impact

- Flight Simulation for Training & RDT&E
- Mission Planning & Mission Rehearsal
- Modeling and Simulation for System Development, Prototyping, Concept Formulation, Wargame & Major Operational Exercise Support
- Reconnaissance and Surveillance for Targeting, Logistics, Special Forces
- C4ISR Display Support, SAR & Test Range Operations
- UAV & UCAV Mission Control
- Cockpit Displays for Flight & Mission Control - A/C Synthetic Vision Systems
- Major Payoffs in Common Architecture, Interoperability & Reusable Models

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There is a 2 Min video demonstration taken from the GVP DVD  
(The DVD has been approved for public release)